

Adarsh Patel

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Summary

Experienced Data Engineer with a proven track record in designing and implementing efficient ETL/ELT pipelines across diverse platforms. Proficient in leveraging advanced tools like Informatica IICS, PowerCenter, Databricks, Python, DLT, DBT, and Mage AI to build scalable, metadata-driven data solutions. Skilled in creating high-performance dashboards with Power BI, managing cloud storage, and optimizing data infrastructure with robust security practices.

Expert in automating CI/CD workflows, ensuring data quality through advanced checks, and developing secure, scalable web applications using Spring Boot, React, Next.js, and Bootstrap. Adept at delivering rich front-end data visualizations with AG Grid and AG Chart. A strategic team player focused on driving business intelligence and decision-making with actionable data insights.

Experience

DATA ENGINEER | 05/2023 - Current

BITTWOBYTE - REWA, India

ETL/Data Engineering Expertise

- **ETL Workflow Design & Implementation:** Designed and implemented end-to-end ETL workflows using Informatica Intelligent Cloud Services (IICS) and Informatica PowerCenter, aligning technical solutions with business requirements.
- Utilized **Mage AI** for ETL process design and deployment, streamlining data pipelines for various use cases. Deployed **Mage AI** in **Docker** for scalable and efficient ETL operations.
- Collaborated with stakeholders to gather requirements and translate them into technical specifications for ETL solutions.
- Utilized SQL for complex data transformations, ensuring accuracy and reliability in large-scale data migrations.
- **Databricks Metadata-Driven Pipelines:** Architected scalable, metadata-driven pipelines using Databricks Delta Live Tables (DLT), focusing on parallel execution and maintainability. Designed robust data quality frameworks with DLT expectations, enabling automated validation and proactive monitoring of data integrity. Implemented data ingestion workflows for structured, semi-structured, and unstructured data into Delta Lake, leveraging Databricks features like Auto Loader, caching, and job cluster orchestration for optimized performance.
- **CI/CD Integration:** Established CI/CD pipelines using GitHub Actions, automating testing and deployment for collaborative and rapid development cycles. Streamlined analytics workflows by integrating DBT (Data Build Tool) transformations with automated CI/CD pipelines, improving code modularity and deployment efficiency.
- **Advanced Data Transformation and Optimization:** Built data pipelines using DLT Hub Python Library, efficiently processing and structuring data from diverse databases. Leveraged DBT to transform raw data into high-quality datasets, improving accessibility for business intelligence.

AWS and Cloud Data Engineering

- **Infrastructure and Data Management:** Designed, deployed, and managed EC2 instances, ensuring scalable and secure application workflows. Migrated and managed files in AWS S3, implementing well-organized folder hierarchies and efficient storage solutions.
- **Python Automation for Cloud:** Developed Python scripts to automate data loading, processing, and integration from multiple sources into consolidated databases.

Created an end-to-end Python automation framework for cross-cloud data transfer, enabling efficient storage and retrieval of data.

Ensured consistency in data ingestion pipelines, applying best practices in cloud security and cost optimization.

Web Development & Application Engineering

- **React and Node.js Application Development:** Developed and deployed a scalable School Management System with a React frontend and Node.js backend, supporting efficient data management and robust performance. Designed a multi-tenant architecture to support multiple schools on a single platform, optimizing system performance while maintaining strict data isolation.
- **Security and Integration:** Implemented a comprehensive security structure using role-based access control (RBAC) to manage user permissions and safeguard sensitive data. Built a flexible database schema and RESTful APIs for seamless frontend-backend integration and efficient CRUD operations. Integrated advanced authentication and authorization mechanisms to ensure system scalability and data privacy.
- **User Experience and Optimization:** Delivered a high-performance solution focused on scalability, user experience, and maintainability, enhancing operational efficiency for users.

SOFTWARE DEVELOPER | 10/2022 - 04/2023

Zylozy - Mumbai, India

- Participated in the full software development lifecycle from requirements gathering to deployment. Implemented frontend features using SpringBoot, ensuring responsiveness and a seamless user experience.
- Developed RESTful APIs in SpringBoot for backend functionalities such as user authentication and data management.
- Collaborated with UI/UX designers to translate design mockups into functional frontend components. Provided technical support and addressed issues reported by end-users.

Projects

- **Project: ETL/ELT Development**

Technologies Used: Informatica Intelligent Cloud Services (IICS), Informatica PowerCenter, Databricks, Python, DLT, Data Build Tool (DBT), SQL, Mage AI

- **Responsibilities:** Designed and implemented robust ETL workflows to extract, transform, and load data from various source systems into target destinations, including data warehouses and AWS S3 buckets. Automated data loading processes to enhance accuracy, consistency, and reliability, ensuring seamless data integration. Architected scalable, metadata-driven data pipelines using Databricks Delta Live Tables (DLT), focusing on parallel execution and maintainability. Developed efficient ELT pipelines leveraging DLT and Python, optimizing performance and resource utilization. Managed and maintained DBT models for modular and scalable data transformations, utilizing SQL for analytics and reporting. Implemented robust data quality checks within DLT workflows to ensure data integrity and consistency while proactively monitoring pipeline performance to resolve issues and ensure reliability.

- **Project: School Management Tool**

Technologies Used: React, Node.js, RESTful APIs

Responsibilities: Developed and deployed a comprehensive school management application using React for the frontend and Node.js for the backend.

Integrated RESTful APIs to ensure seamless communication between the front and back ends, enhancing the application's functionality and user experience.

- **Project: Cloud Storage Automation**

Technologies Used: Python, AWS S3, Google Cloud Storage

Responsibilities: Created a Python-based web scraper to automate the access and management of folders in cloud storage services such as AWS S3 and Google Cloud Storage.

Developed features allowing users to log in to their cloud storage accounts, select specific folders, and download them locally or transfer them to other cloud storage destinations, streamlining data management processes.

- **Project: Laboratory Information System (LIS)**

Technologies use: Spring Boot, HTML, CSS, JavaScript, Bootstrap

Responsibilities: Developed a healthcare software solution for processing, storing, and managing patient data

related to laboratory processes and testing.

Utilized Spring Boot for the backend, and HTML, CSS, JavaScript, and Bootstrap for the frontend, ensuring a seamless user experience.

Implemented robust authentication and authorization mechanisms using Spring Security to ensure data protection and access control.

Skills

PROGRAMING LANGUAGE

Java, Python, C, C++

WEB DEVELOPMENT

HTML, CSS, JavaScript, React, NextJS, BootStrap

DATABASES

Oracle, Postgres, Snowflake, Mysql, MsSql

DASHBOARD TOOL & library

Power-BI, AG Chart & AG Grid

BIG DATA FRAMEWORKS

PySpark, Databricks

SCHEDULERS & AWS

Airflow, AWS Storage, EC2, CloudWatch, Lambda, CloudFront,Cloud Databases

CONTROL SYSTEMS & DOCUMENTATION

Git, Jira, ServiceNow

DATA EGINEERING TOOL

IICS, Power Center, DBT, DTLHUB, Mage AI

Education

RGPV University - Bhopal | Bachelor of Science

Computer Science, 2023

Languages

English, Hindi: First Language

Certifications

- AWS Solution Architect - Associate certified
- AWS Cloud Practitioner certified